AMENDMENTS TO THE SPECIFICATOIN

Please replace the paragraph beginning on page 8, line 25 and ending on page 9, line 17 with the following paragraph:

-- Referring to Fig. 3 there is illustrated in a block diagram a portion of the photonic network of Fig. 1 in accordance with another embodiment of the present invention. In addition to the network elements shown in Figs. 1 and 2, Fig. 3 includes a central core node 70 including a photonic node 72, similar in structure to the tandem node 36 and a metropolitan packet node (or code router) 74 with the central multiple lambda source 68 coupled thereto. As previously shown an access multiple lambda source 38 is coupled to the ~~access~~ edge node 12. The core router 74 has associated DWDM transponders 76 and 78 that operate in a similar manner to those described with regard to the access node 24. A coupler, interleaver or other multiplexing device 90 connects the multi-lambda source 38 to the ~~access~~ edge node 12 and a coupler, interleaver or other multiplexing device 92 connects the multi-lambda source 68 to the core node 70. This could be via extra ports of downstream DWDM or even through the switch, but doing so would use up one third of the switch ports. The combining could be done on the downstream portion of the access line card of the switch. For example, in an 8 channel sparse DWDM scenario, we would provide 8 wavelength WDM upstream, and 8+8 channel WDM downstream, where 8 channels are switched through the switch and are modulated with traffic to the AN's and 8 channels are unmodulated carriers from the MLS to be turned round and modulated. These can be passed through 16 ch WDM filters downstream or through broad-lobed 8 channel parts, with both unmod and mod carriers passing through the same lobe. --

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Please replace the paragraph beginning on page 9, line 18 and ending on page 10, line 7 with the following paragraph:

-- In operation, optical carriers at all required wavelengths or optical frequencies are all generated in the photonic layer either adjacent the core nodes, for example central core node 70 or adjacent the edge photonic switches, for example edge photonic switch 12. The access optical carriers at the required wavelengths are

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allocated out to the photonic access nodes for modulation from the access multiple lambda source 38 coupled to the ~~access~~ edge node 12. Similarly, the core wavelengths are coupled to the core node 70 for modulation. This embodiment of the present invention has the further advantage of providing wavelengths to be modulated in relatively close proximity to the modulators. In the present embodiment, the closest the optical gets to the modulator is the other end of an access fiber. The optical source suffers some degradation when being transmitted over this fiber, because the signal level of the optical carrier will be attenuated, however other impairments such as chromatic dispersion are irrelevant since there are no modulation sidebands to disperse on the downstream optical carrier transmission prior to modulation. According to this embodiment of the present invention, to ensure that the upstream wavelength is both the correct wavelength and is of sufficient precision to enter the DWDM network, the access modulator is provided with an optical carrier it is to modulate, from the access multi-lambda source 38. Similarly, to ensure that the downstream wavelength is both the correct wavelength and is of sufficient precision to transit the DWDM network, the core node modulator is provided with an optical carrier it is to modulate, from the central multi-lambda source 68. --